

REMARKS

This amendment is in response to the Office Action dated March 27, 2003. With entry of this amendment, claims 1-6, 12, 14-17, and 36-42 are pending. Claims 1-4 and 12 are amended. Claims 7-11, 13, and 18-35 are cancelled in order to further prosecution. Claims 36-42 are newly presented. No new matter is entered.

Procedural history

The above-referenced patent application was filed on September 1, 1999. A first office action was mailed June 5, 2002, indicating the allowability of some of the pending claims, while rejecting other claims. An amendment was filed on September 5, 2002, amending some claims and adding additional claims. A final office action was mailed December 4, 2002. An amendment after final rejection was filed March 4, 2003, objecting to the finality of the December 4, 2002 office action, and making further amendments, cancellations and additions to the set of pending claims. Specific details of claim amendments, cancellations and additions are found in the amendments themselves.

The present office action (March 27, 2003), which is a non-final action, followed the March 4, 2003, amendment.

It appears from the text of the present office action (March 27, 2003) that the amendment filed on March 4, 2003, has not been entered. Specifically, the present office action rejects claims that were cancelled in the March 4, 2003, amendment, and the text of claim rejections does not contain features added to the claims in the March 4, 2003, amendment. The language of the March 27, 2003 office action is identical to the language of the December 4, 2002 office action, except for the portions that made the December 4, 2002, office action final.

Therefore, this amendment is written as if the amendment filed March 4, 2003, was not entered, i.e., amendments are made to the claims as they were pending after the amendment filed September 5, 2002.

Allowable subject matter

Claims 14-17 were deemed allowable in the first Office Action and are now allowed. The Applicants thank the Examiner for recognizing the patentability of these claims.

Brief discussion of claimed subject matter

Embodiments of the invention are directed to a device and method for compensating for color blindness. Claimed embodiments include a system for displaying images that are adjusted for color blindness. Included in the system is a compensation processor that includes color remappings. As described in the specification, for instance on page 6, the compensation processor includes one or more lookup tables of color remappings. The remappings can also be performed using algorithms. These remappings allow the system to display a color normally associated in a first position of color space as another color. Specifically, the remappings allow the system to display a color that would otherwise have no contrast from other colors to a person who is color blind as a color that does have contrast to such a person.

Differently from other prior art in the field, embodiments of the present invention provide pre-selected remappings to a user, and do not force the user to make the remappings himself or herself. This relieves the intended user from performing remapping adjustments, which can be difficult and/or tedious. Embodiments of the invention, therefore, provide intended users with a system that is beneficial and provides a good benefit to them individually, while absolving them from the burdens of excessive tinkering to make color corrections.

Claim rejections

Many claims rejected by the Examiner have been cancelled in this amendment. Specifically, claims 7-11, 13, and 18-35 are cancelled to further prosecution. Of those previously rejected claims remaining, claims 1-6, and 12 were rejected as being anticipated by Yui (U.S. Pat. No. 5,677,741) in view of Ueda et al (US 5,986,642). Yui is the main reference. The Examiner uses Ueda to teach simultaneous display of an original signal and an adjusted signal.

Yui's teachings relate to color changing processes for particular users. Specifically, every user who "turns on a custom registration button" generates his or her own "custom table data." Yui, Column 3, lines 58-62. As illustrated in FIG. 1 of Yui, the users' custom tables are stored in custom table memory 9. Once created in Yui, each custom table is related to an individual user ID. When a user who has a custom table pre-loaded in the Custom Table Memory 9 inputs personal ID information, Yui's system automatically uses the table in the custom table memory specific for that user to generate video signals.

Oftentimes, however, users do not know how to adjust color signals, or do not want to take the time to experiment with adjusting the color controls. Unlike Yui's system, embodiments of the invention actually make it easy for a user to select a video signal that is more useful to them than the original video signal. One of the ways that embodiments of the invention do this is to provide the user with only pre-defined remappings that were specifically tailored for different types of color blindness. In this way, the user selects the best of a group of signals that were already pre-formatted to be the most likely to benefit the user, i.e., the remapping table is already pre-loaded with remappings for the most common types of color blindness. Therefore, the user need not experiment with a multitude of (and sometimes confusing) different settings to create images in which they can differentiate colors.

These differences are seen in the claims as well. For instance, claim 1 includes a compensation processor that has a plurality of separate color point remappings that are non-modifiable by a user of the video system. This is neither anticipated nor suggested by Yui, who forces his users to modify the color levels. Specifically, in steps S5, S8, and S11 of FIG. 2A and 2B of Yui, and as described in column 3, lines 43-58, a user of Yui must "adjust the RGB control dial 11 while observing the R-scale color bar image displayed on the display 6, thereby changing the characteristics of table data as the user desired." This process is then repeated for the Green and Blue colors. Such processes can be exceedingly difficult and/or frustrating for a user who cannot easily discern between colors, such as a color blind user, or one who does not know how to properly adjust color signals.

Indeed, Yui actually teaches away from the invention because Yui gives the user *more* control over their image systems while embodiments of the invention, conversely, give the user *less* control. But hopefully the pre-defined remappings will be easier to use and ultimately provide an easier way for the user to select a video signal that is more beneficial to a color blind user. The teachings of Ueda do not make up for the limitations of Yui because a system including both Yui and Ueda would simply show more than one image, and still require the user to modify his or her own color remappings.

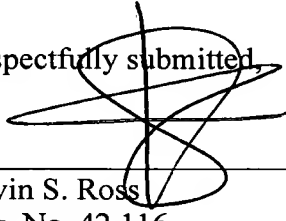
Claim 12 is likewise not anticipated or suggested by Yui and/or Ueda, because the transform is "non-modifiable by a user of the display."

Newly added claims 38-42 are directed to similar subject matter as already allowed claims 14-17. Specifically, these claims define how to make a color blindness compensating remapping table. As the Examiner noted in the first Office Action, these features are not taught or suggested in the prior art.

Conclusion

For the foregoing reasons, reconsideration and allowance of claims 1-6, 12, 14-17, and 36-42 of the application as amended is solicited. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

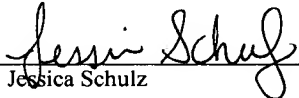


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